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**Butt Fusion Integrity & Evaluation of
NDE Technologies – Phase II**

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**12th Quarterly Report
(Twelfth Payable Milestone)**

For Quarterly Report Ending: September 31, 2010

Funds and Work Completed During this Quarterly Period

Details relating associated work completed during this quarter with the invoice amount are provided under a separate cover.

Technical Status

Joint Industry Steering Committee

During the past quarter, there have been continued discussions among the steering committee members related to the technical next steps and proposed modification to respective industry standards/specification and guidelines. The discussions have focused on comparison of the ISO and PPI/ASTM joining procedures – similarities and differences. Based on comparing the two respective documents, it is clear that technical data developed as part of this program will help to “harmonize” the respective procedures promulgated to the industry at the present time.

Integration with Standards and Specifications

The first phase of this project revealed extreme relationships within PE pipe samples fabricated from accepted ranges within PPI TR-33 standard practice butt fusions.

The discussions with PPI are currently on-going to revise PPI TR-33 document to reflect some of the initial results of this program by increasing the heater iron temperature 500°F. While there is support to revise this document, additional data needs to be developed and there needs to be a concerted effort to educate various organizations and companies for the rationale behind the proposed changes. It is hoped that the subsequent results of the testing from this phase of the program will help to support and validate this specific revision.

Fabrication Test Specimens

All butt fusion samples have been fabricated.

Comprehensive Long Term Testing

All of the joint specimens incorporating different joining process parameters have been fabricated.

Performing NDE Technologies on PE Butt Fusion Samples

During this quarter, NDE technologies were the primary area of focus. Specifically, five NDE equipment suppliers, using their equipment and procedures, performed NDE inspections of the joint specimens

Business Status

The industry focus safety remains strong especially regarding jointing of PE pipe. PE pipe is a highly engineered product that is evolving in characteristics that need to be examined for joining consistency. Interest is expected to remain strong in the area of PE pipe joining safety, optimization of fusion parameters for long life and durability. The importance of revealing the optimum fusion parameters is imperative.

Schedule

The overall project schedule has remained in step per the milestone schedule.

Results and Conclusions

Results or conclusions will be forthcoming once the butt fusion specimens have begun to reach their breaking point during testing.

Issues, Problems and Challenges

The project is on target with its task milestones with no problems to report. It is important to note, that given the uncertainty with respect to the actual failure times in testing, it is difficult to project the possible impact to the overall schedule. As the samples are tested and the time-to-failure is being reported, more clarity in terms of the impact to the proposed schedule will be reported.

Plans for future Activity

Joint Industry Steering Committee Interactions

- During the 3Q 2010, a steering committee meeting has been planned during October 2010. The objective of this meeting will be to review all the technical aspects of this program and establish consensus with respect to changes to industry standards and specifications.

Development of an Analytical Model

- During 4Q 2010, all of the butt fusion samples will begin testing. Previous experience indicates that some samples probably fail in a short period of time while others will last until the end of acceptable testing.

Comprehensive Long Term Testing

- During 4Q 2010, as testing gets underway the NDE reports will be prepared for comprehensive review and comparison to the test samples as failures begin to occur.

Integration with Standards and Specifications

- Routine steering committee interaction with the ASTM groups and AGA PMC will provide updates of the project status and results.